

ILLINOIS POLLUTION CONTROL BOARD
February 4, 1999

IN THE MATTER OF:)
)
SDWA UPDATE, USEPA REGULATIONS) R99-6
(January 1, 1998, through June 30, 1998)) (Identical-in-Substance Rulemaking -
) Public Water Supplies)

Adopted Rule. Final Order.

OPINION AND ORDER OF THE BOARD (by R.C. Flemal):

Under Section 17.5 of the Environmental Protection Act (Act) (415 ILCS 5/17.5 (1996)), the Board adopts amendments to the Illinois regulations that are “identical-in-substance” to National Primary Drinking Water regulations (NPDWRs) adopted by the United States Environmental Protection Agency (USEPA). These regulations implement sections 1412(b), 1414(c), 1417(a), and 1445(a) of the Safe Drinking Water Act (SDWA), 42 U.S.C §§ 300g-1(b), 300g-3(c), 300g-6(a) & 300j-4(a). The nominal timeframe of this consolidated docket includes federal SDWA amendments that USEPA adopted in the period January 1, 1998, through June 30, 1998. USEPA undertook two actions during this period: a revision to the state primacy requirements that included an expansion of the definition of the term “public water system,” and the removal of the prohibition against the use of point-of-use devices to achieve compliance with an NPDWR.

Section 17.5 provides for quick adoption of regulations that are “identical-in-substance” to federal regulations that USEPA adopts to implement sections 1412(b), 1414(c), 1417(a), and 1445(a) of SDWA. Section 17.5 also provides that Title VII of the Act and Section 5 of the Administrative Procedure Act (APA) (5 ILCS 100/5-35 & 5-40 (1996)) do not apply to the Board’s adoption of identical-in-substance regulations. The federal SDWA regulations are found at 40 C.F.R. 141 and 142.

PROCEDURAL BACKGROUND

In July 1998, the Board reserved docket R99-6 for amendments to the federal SDWA primary drinking water regulations that USEPA adopted in the period of January 1, 1998, through June 30, 1998. Under Section 7.2 of the Act, the deadline for Board adoption of amendments under docket R99-6 is April 28, 1999, which is one year after the earliest federal amendments that occurred in the timeframe of the docket.

The Board adopted a proposal for public comment in this matter on November 19, 1998. A Notice of Proposed Amendments appeared in the December 11, 1998 issue of the *Illinois Register*, at 22 Ill. Reg. 21236, beginning the 45-day public comment period. The public comment period expired on January 25, 1999, leaving the Board free to adopt

amendments based on the November 19, 1998 proposal for public comment. This we do with the present opinion and order.

The Board will file these adopted amendments with the Office of the Secretary of State as soon as possible and cause a Notice of Adopted Amendments to appear in the *Illinois Register*.

FEDERAL ACTION CONSIDERED IN THIS RULEMAKING

USEPA amended the federal SDWA regulations twice during the period of January 1, 1998, through June 30, 1998. Those actions are summarized as follows:

63 Fed. Reg. 23361 (April 28, 1998)

USEPA adopted amendments to the requirements for authorization of state SDWA programs, *i.e.*, the state primacy requirements. The primary aspects of this action relate to state civil penalty authority, the time within which the state must adopt amendments corresponding to federal amendments, and the primacy status of the state pending a final USEPA determination on its primacy application. Accompanying amendments clarify the NPDWR definition of “non-community water system,” expand the definition of “public water system,” and add a definition of “service connection.”

63 Fed. Reg. 31932 (June 11, 1998)

USEPA adopted amendments that allow the use of point-of-entry devices to meet the NPDWRs. USEPA did this by removing the prohibition against doing so.

The Board is proposing to amend the Illinois regulations to incorporate the two sets of federal amendments.

In addition to the amendments that are driven by USEPA amendments to the NPDWRs, the Board has added amendments derived from a federal statutory amendment. Those amendments are derived from amendments to section 1417(a) of SDWA (42 U.S.C. § 300g-6(a) (1996)) made by Congress in the 1986 SDWA amendments (Pub. L. 104-182, Title I, § 118, 110 Stat. 1645, 1691) that prohibit the use of lead-containing fixtures.

PUBLIC COMMENTS

The Board kept the record open to receive public comments on the November 19, 1998 proposal until January 25, 1999, which was 45 days following the publication of the Notice of Proposed Amendments in the *Illinois Register*. During the public comment period, the Board received no public comments. However, the Board did receive a document from the Joint Committee on Administrative Rules (JCAR) on December 17, 1998, which outlines a number of corrections to the text of the amendments that are recommended by JCAR staff. The JCAR-recommended revisions are considered in the discussion segments of this opinion. The

discussion of the JCAR-recommended revisions appear in the tables that begin of pages 10 and 11 below.

DISCUSSION

The federal actions that underlie this proceeding require amendment of the Illinois SDWA regulations. However, not all of the federal amendments resulted in corresponding change in the Illinois rules, since some segments of those amendments extend beyond the scope of the Illinois SDWA rules as adopted pursuant to Section 17.5 of the Act. The Board considers the two sets of federal amendments separately.

State Primacy Requirements and NPDWR Definitions—Section 611.101

USEPA adopted amendments to the state primacy requirements on April 28, 1998. The state primacy amendments relate to state civil penalty authority, the time within which the state must adopt amendments corresponding to federal amendments, and the primacy status of the state pending a final USEPA determination on its primacy application. Amendments accompanying those pertaining to state primacy affect the NPDWR definitions of “non-community water system” and “public water system,” and they add a definition of “service connection.” The Board directs attention to the April 28, 1998 issue of the *Federal Register* for a fuller discussion of the federal amendment. The Board’s discussion here will focus on our incorporation of those amendments into the Illinois SDWA regulations.

The federal-state primacy requirements set forth what USEPA will require of state SDWA programs. When granted primacy pursuant to section 1413 of SDWA, 42 U.S.C. § 300g-2 (1996), a state has the primary authority for enforcement of the SDWA program NPDWRs within its borders. 40 C.F.R. 141 sets forth the NPDWRs, and 40 C.F.R. 142 sets forth the requirements for implementation of the NPDWRs, including the requirements for state primacy.

When assessing federal amendments in the course of completing our SDWA regulation updates, the Board includes all USEPA amendments to 40 C.F.R. 141, and we evaluate the amendments to 40 C.F.R. 142 for their effect on the substance of the NPDWRs. If the USEPA amendments to 40 C.F.R. 142 affect little more than the state primacy requirements—*i.e.*, they constitute requirements on the states only, the Board does not include them in the affected SDWA update docket. On the other hand, if the amendments affect the application of the NPDWRs on water suppliers, the Board includes amendments that incorporate that affect into the Illinois SDWA rules.

The primary impact of the federal SDWA amendments of April 28, 1998, is to amend the requirements for state primacy at 40 C.F.R. 142.2 and 142.10 through 142.12. Examination of each of the USEPA amendments indicates that no Board action is required on any of them. All the amendments relate to requirements imposed on the State of Illinois, and none relate to requirements imposed on drinking water suppliers. Thus, they do not affect the substance of the NPDWRs.

Amendments to the 40 C.F.R. 141.2 definitions accompanying the state primacy amendments did affect a segment of the NPDWR rules. The Board has included amendments to corresponding 35 Ill. Adm. Code 611.101 in this proposal for public comment. We have made the required amendments with minimal deviation from the federal text. The tables beginning on page 5 indicate the revisions made in the verbatim wording of the federal amendments and to the base text of the regulations. The minor nature of most of these revisions does not warrant discussion. On the other hand, a small number of the revisions merit explanation. The Board has omitted the effective date of August 5, 1998, from the definition of August 5, 1998, since that date is now past. In the definitions of “service connection” and “special irrigation district,” we have designated the usage “domestic use and similar uses” in place of “domestic and similar uses.”

In the definitions of “service connection” and “special irrigation district,” the Board has proposed the use of the mechanism of the special exception permit (SEP) for the Agency to make certain findings. The exclusion from the definition of “service connection” and inclusion in the definition of “special irrigation district” require a necessary finding by the State that alternative water is available or treatment is provided that would achieve the NPDWRs. The mechanism of the SEP is the established mode for the Agency to make necessary findings and permit an activity that constitutes an aberration from a generally-applicable rule.

The Board notes that USEPA borrowed the conditional language from section 1401(4)(B)(i)(II) and (4)(B)(i)(III) of SDWA (42 U.S.C. § 300f(4)(B)(i)(II) & (4)(B)(i)(III) (1996)) nearly verbatim when drafting the definition of “service connection.” USEPA required compliance with the conditions of SDWA section 1401(4)(B)(i)(II) or (4)(B)(i)(III) in the definition of “special irrigation district.” Rather than reference SDWA section 1401(4)(B)(i)(II) and (4)(B)(i)(III) in the definition, the Board inserted language parallel to that used in the definition of “service connection,” which USEPA repeated from this SDWA provision. Since the necessary findings that would allow the exception are to be made by the State, incorporating the conditional language is more desirable than would be incorporating section 1401(4)(B)(i)(II) and (4)(B)(i)(III) by reference. Further, owing to the ultimate source of the conditions set forth in the definition of “service connection,” the Board has added a reference to section 1401(4)(B)(i)(II) and (4)(B)(i)(III) of SDWA to the Board note following the definition.

The Board requested public comment on the proposed amended definitions. We particularly directed attention to the specific issues discussed above. We received no comments in response.

End of the Prohibition against the Use of Point of Use Devices—Section 611.290

USEPA lifted the prohibition against the use of point-of-entry devices to achieve compliance with an NPDWR on June 11, 1998. The Board directs attention to the June 11, 1998, issue of the *Federal Register* for a fuller discussion of the federal amendment. The Board proposes the federal amendment verbatim in Section 611.290(a) by removing the reference to point-of-use devices.

The Board requested public comment on the removal of the prohibition against the use of point-of-use devices to achieve compliance with an NPDWR. We received no comments in response.

Prohibition against the Use of Lead-Containing Fixtures—Section 611.126

Section 611.126 is a requirement for the use of lead-free solder and pipe in drinking water systems. It was derived from 40 C.F.R. 141.43. It is apparent that USEPA derived 40 C.F.R. 141.43 nearly verbatim from section 1417(a)(1) of SDWA (42 U.S.C. § 300g-6(a)(1) (1998)). The Congress amended SDWA section 1417(a)(1) in the 1996 SDWA reauthorization legislation (Pub. L. 104-182, Title I, § 118, 110 Stat. 1645, 1691) to further require the use of lead-free pipe, fittings, and fixtures. The legislation prohibits the distribution of fixtures and fittings in commerce for drinking water use that are not lead-free after August 6, 1998. The legislation defines “lead-free,” as it relates to plumbing fittings and fixtures, to mean articles that comply with voluntary third-party standards and testing protocols that were to be derived based on information and assistance provided by USEPA. On August 22, 1997, USEPA published a notice in the *Federal Register* (62 Fed. Reg. 44684) stating its position that the National Sanitation Foundation (NSF) has established the required voluntary standard in September 1994: NSF Standard 61, section 9. The standard is available from the NSF International, 3475 Plymouth Road, PO Box 130140, Ann Arbor, Michigan 48113-0140 (telephone: 313-769-8010).

Although USEPA has not amended 40 C.F.R. 141.43 to incorporate the statutory requirement for the use of lead-free fittings and fixtures, the Board is proposing to amend Section 611.126 to incorporate the requirement based on the 1996 SDWA amendments to section 1417(a)(1). We do so because Section 611.126 might be misleading without incorporating the ban. In proposing this amendment, we note that Section 17.5 of the Act specifically authorizes the Board to adopt federal amendments made pursuant to section 1417(a) of SDWA. The requirement of SDWA section 1417(a) is essentially self-implementing after the August 8, 1998, effective date; in announcing its determination on the NSF standard, USEPA stated that it preferred implementation of the lead ban by use of the standard than by adoption of a regulation. It appears that USEPA will not amend 40 C.F.R. 141.43 to incorporate the new ban. Unless the Board incorporates the federal legislative ban into the Illinois regulations, the Illinois SDWA rules will not be identical-in-substance to federal law governing the use of lead plumbing fittings and fixtures. In fact, Illinois law would be less stringent than the minimum federal requirements.

In incorporating NSF standard 61 by reference, the Board notes that the current version of the standard is dated November 1998. This is the only one currently available. The NSF intends to publish an updated version in February 1999, which will replace the 1998 version and render it unavailable from the NSF. We have incorporated the November 1998 version by reference, since that is the version that the Board has available for public inspection pursuant to Section 5-75 of the Administrative Procedure Act, 415 ILCS 100/5-75 (1998).

The Board requested public comment on the proposed addition of the requirement for use of lead-free fixtures and fittings to the ban on lead solder and pipe. We received no comments in response.

DEVIATIONS FROM THE FEDERAL AMENDMENTS AND REVISIONS TO
THE TEXT OF THE PROPOSAL FOR PUBLIC COMMENT

In the following tables, the Board indicates the location and nature of the deviations from the literal text of the federal amendments involved in this proceeding and revisions to the text of the proposal for public comment. The first table includes deviations made in the Proposal for Public Comment from the verbatim text of the federal amendments that are driving this docket. The second table indicates corrections and clarifications that the Board had discovered and made in the base text involved the proposal. The amendments listed in this second table are not directly derived from the current federal amendments. The second table begins on page 7 of this opinion. The third table, which begins on page 10 of this opinion, indicates the revisions made to the text of these amendments as proposed in our November 19, 1998, opinion and order. The associated fourth table beginning on page 11 indicates the recommended changes to the proposed text that the Board has not accepted. The source of each recommendation for changes to the proposed text are indicated in the center column of the third and fourth tables. Some of the entries in these tables are discussed further in appropriate segments of the general discussions beginning on page 3 of this opinion and order.

Deviations from the Text of the Federal Amendments

Illinois Section	40 C.F.R. Section	Revision(s)
611.101 "public water system"	141.2 "public water system"	Omitted "August 5, 1998" past effective date
611.101 "service connection"	141.2 "service connection"	Added quotation marks to defined term; added "any of the following is true;" added "by issuing a SEP" (twice); used "residential use or similar uses" in place of "residential or similar uses" (twice); moved "is provided;" moved "to achieve . . . regulations;" changed to plural "regulation;" added Board note and references to SDWA provisions
611.101 "special irrigation district"	141.2 "special irrigation district"	Added quotation marks to defined term; used "residential use or similar uses" in place of "residential or similar uses;" used "residential users or similar users" in place of "residential or similar users;" added "either of," "following exclusion conditions," and language from definition of "service connection" in place of citation to SDWA provisions; added Board note and references to SDWA provisions
611.126(b)(3)	SDWA section 1417(d)(3)	Added reference to "NSF Standard 61, paragraph 9

Board Amendments Not Federally-Derived

Section	Revision(s)
611.101 “approved source of bottled water” Board Note	Updated C.F.R. edition cited
611.101 “best available technology” Board Note	Updated C.F.R. edition cited
611.101 “CT” Board Note	Updated C.F.R. edition cited
611.101 “best available technology” Board Note	Updated C.F.R. edition cited
611.101 “CT _{99.9} ” Board Note	Updated C.F.R. edition cited
611.101 “coagulation” Board Note	Updated C.F.R. edition cited
611.101 “community water system” Board Note	Updated C.F.R. edition cited
611.101 “compliance cycle” Board Note	Updated C.F.R. edition cited
611.101 “compliance period” Board Note	Updated C.F.R. edition cited
611.101 “confluence growth” Board Note	Updated C.F.R. edition cited
611.101 “contaminant” Board Note	Update C.F.R. edition cited
611.101 “conventional filtration treatment” Board Note	Updated C.F.R. edition cited
611.101 “diatomaceous earth filtration” Board Note	Updated C.F.R. edition cited
611.101 “direct filtration” Board Note	Updated C.F.R. edition cited
611.101 “disinfectant” Board Note	Updated C.F.R. edition cited
611.101 “disinfectant contact time” Board Note	Added comma at end of indented paragraph; updated C.F.R. edition cited
611.101 “disinfection” Board Note	Updated C.F.R. edition cited
611.101 “distribution system” Board Note	Updated C.F.R. edition cited
611.101 “domestic or other non-distribution system plumbing problem” Board Note	Updated C.F.R. edition cited
611.101 “dose equivalent” Board Note	Updated C.F.R. edition cited
611.101 “filtration” Board Note	Updated C.F.R. edition cited

611.101 “flocculation” Board Note	Updated C.F.R. edition cited
611.101 “gross alpha particle activity” Board Note	Updated C.F.R. edition cited
611.101 “gross beta particle activity” Board Note	Updated C.F.R. edition cited
611.101 “groundwater under the direct influence of surface water” Board Note	Updated C.F.R. edition cited
611.101 “GWS” Board Note	Updated C.F.R. edition cited
611.101 “halogen” Board Note	Updated C.F.R. edition cited
611.101 “inactivation ratio” Board Note	Updated C.F.R. edition cited
611.101 “initial compliance period” Board Note	Updated C.F.R. edition cited
611.101 “legionella” Board Note	Updated C.F.R. edition cited
611.101 “man-made beta particle and photon emitters” Board Note	Updated C.F.R. edition cited
611.101 “man-made beta particle and photon emitters” Board Note	Updated C.F.R. edition cited
611.101 “man-made beta particle and photon emitters” Board Note	Updated C.F.R. edition cited
611.101 “maximum contaminant level” Board Note	Updated C.F.R. edition cited
611.101 “maximum total trihalomethane potential” Board Note	Updated C.F.R. edition cited
611.101 “MFL” Board Note	Updated C.F.R. edition cited
611.101 “mixed system” Board Note	Updated C.F.R. edition cited
611.101 “near the first service connection” Board Note	Updated C.F.R. edition cited
611.101 “non-community water system” Board Note	deleted reference to the definition of “public water system;” updated C.F.R. edition cited
611.101 “non-transient non-community water sytem” Board Note	Updated C.F.R. edition cited
611.101 “performance evaluation sample” Board Note	Updated C.F.R. edition cited
611.101 “person” Board Note	Updated C.F.R. edition cited
611.101 “picocurie” Board Note	Updated C.F.R. edition cited
611.101 “point of disinfectant application” Board Note	Updated C.F.R. edition cited

611.101 “point-of-entry treatment device” Board Note	Updated C.F.R. edition cited
611.101 “point-of-use treatment device” Board Note	Updated C.F.R. edition cited
611.101 “public water system” Board Note	Updated C.F.R. edition cited
611.101 “reliably and consistently” Board Note	Updated C.F.R. edition cited
611.101 “rem” Board Note	Updated C.F.R. edition cited
611.101 “repeat compliance period” Board Note	Updated C.F.R. edition cited
611.101 “representative” Board Note	Updated C.F.R. edition cited
611.101 “residual disinfectant concentration” Board Note	Updated C.F.R. edition cited
611.101 “Safe Drinking Water Act” Board Note	Added bill title, “Safe Drinking Water Act;” updated C.F.R. edition cited
611.101 “sanitary survey” Board Note	Updated C.F.R. edition cited
611.101 “sedimentation” Board Note	Updated C.F.R. edition cited
611.101 “slow sand filtration” Board Note	Updated C.F.R. edition cited
611.101 “standard sample” Board Note	Updated C.F.R. edition cited
611.101 “supplier of water” Board Note	Updated C.F.R. edition cited
611.101 “surface water” Board Note	Updated C.F.R. edition cited
611.101 “SWS” Board Note	Updated C.F.R. edition cited
611.101 “system with a single service connection” Board Note	Updated C.F.R. edition cited
611.101 “too numerous to count” Board Note	Updated C.F.R. edition cited
611.101 “total trihalomethanes” Board Note	Updated C.F.R. edition cited
611.101 “transient, non-community water system” Board Note	Updated C.F.R. edition cited
611.101 “treatment” Board Note	Updated C.F.R. edition cited
611.101 “VOC” Board Note	Updated C.F.R. edition cited
611.101 “waterborne disease outbreak” Board Note	Updated C.F.R. edition cited

611.101 “wellhead protection program” Board Note	Updated C.F.R. edition cited
611.102(b) American Waterworks Association	Removed duplicate entry for “Standard Methods” 18th edition
611.102(b) NTIS	Added quotation marks in Board note following “Technical Notes on Drinking Water Methods”
611.102(c)	Updated C.F.R. edition cited
611.126(a)	Corrected subsection designation from “d” to “b”
611.126(a)(1)	Corrected “which” to “that”
611.126(b)	Corrected subsection designation from “d” to “b”
611.126 Board Note	Changed correlation reference to indicate 40 CFR 141.43(a) and (d);” added reference to “42 U.S.C. § 300g-6(a)(1)”
611.290 Board note	Updated C.F.R. edition cited

Revisions to the Text of the Proposed Amendments in Final Adoption

Section Revised	Source(s) of Revision(s)	Revision(s)
611.101 “Approved source of bottled water”	JCAR	Corrected “U.S.C.” to “USC;” removed section symbols “§§”
611.101 “Best available technology”	JCAR	Corrected “U.S. EPA” to “USEPA”
611.101 “Best available technology”	JCAR	Corrected “U.S. EPA” to “USEPA”
611.101 “Phase I”	JCAR	Corrected “U.S. EPA” to “USEPA”
611.101 “Phase II”	JCAR	Corrected “U.S. EPA” to “USEPA”
611.101 “Phase IIB”	JCAR	Corrected “U.S. EPA” to “USEPA”
611.101 “Phase V”	JCAR	Corrected “U.S. EPA” to “USEPA”
611.101 “public water system”	JCAR	Corrected ending punctuation of first subparagraph to a semicolon; removed unnecessary ending semicolon
611.101 “Safe Drinking Water Act”	JCAR	Corrected “U.S.C.” to “USC”
611.101 “service connection” Board note	JCAR	Corrected “U.S.C.” to “USC;” removed section symbol “§”
611.101 “special irrigation district” Board note	JCAR	Corrected “U.S.C.” to “USC;” removed section symbol “§”
611.101 “total trihalomethanes” Board note	JCAR	Corrected “U.S. EPA” to “USEPA”
611.101 “transient, non-community water system”	JCAR	Corrected “U.S.C.” to “USC;” removed section symbol “§”
611.101 “USEPA”	JCAR, Board	Added “USEPA or”
611.101 “VOC”	JCAR	Corrected “U.S. EPA” to “USEPA”

611.101 “wellhead protection program”	JCAR	Corrected “U.S. EPA” to “USEPA”
611.102(b) “NSF”	Board	Corrected telephone area code; corrected edition of NSF standard 61 incorporated by reference to the current edition
611.126(a)	JCAR	Removed comma after date “1986”
611.126(b)(3)	JCAR	Capitalized “when;” corrected “U.S.C.” to “USC;” removed section symbol “§”

Requested Revision to the Text of the Proposed Amendments Not Made in Final Adoption

Section Affected	Source(s) of Revision(s)	Requested Revision(s): Explanation
611.101 “USEPA”	JCAR	Change “U.S. EPA” to “USEPA”: The Board prefers to retain the defined term “U.S. EPA” until all such references in the text of Part 611 are converted to “USEPA” to avoid any confusion to the regulated community

ORDER

The complete text of the adopted amendments follows:

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE F: PUBLIC WATER SUPPLIES
CHAPTER I: POLLUTION CONTROL BOARD

PART 611
PRIMARY DRINKING WATER STANDARDS

SUBPART A: GENERAL

Section	
611.100	Purpose, Scope and Applicability
611.101	Definitions
611.102	Incorporations by Reference
611.103	Severability
611.107	Agency Inspection of PWS Facilities
611.108	Delegation to Local Government
611.109	Enforcement
611.110	Special Exception Permits
611.111	Section 1415 Variances
611.112	Section 1416 Variances
611.113	Alternative Treatment Techniques
611.114	Siting requirements

611.115	Source Water Quantity
611.120	Effective dates
611.121	Maximum Contaminant Levels and Finished Water Quality
611.125	Fluoridation Requirement
611.126	Prohibition on Use of Lead
611.130	Special Requirements for Certain Variances and Adjusted Standards

SUBPART B: FILTRATION AND DISINFECTION

Section	
611.201	Requiring a Demonstration
611.202	Procedures for Agency Determinations
611.211	Filtration Required
611.212	Groundwater under Direct Influence of Surface Water
611.213	No Method of HPC Analysis
611.220	General Requirements
611.230	Filtration Effective Dates
611.231	Source Water Quality Conditions
611.232	Site-specific Conditions
611.233	Treatment Technique Violations
611.240	Disinfection
611.241	Unfiltered PWSs
611.242	Filtered PWSs
611.250	Filtration
611.261	Unfiltered PWSs: Reporting and Recordkeeping
611.262	Filtered PWSs: Reporting and Recordkeeping
611.271	Protection during Repair Work
611.272	Disinfection following Repair

SUBPART C: USE OF NON-CENTRALIZED TREATMENT DEVICES

Section	
611.280	Point-of-Entry Devices
611.290	Use of Point-of-Use Devices or Bottled Water

SUBPART D: TREATMENT TECHNIQUES

Section	
611.295	General Requirements
611.296	Acrylamide and Epichlorohydrin
611.297	Corrosion Control

SUBPART F: MAXIMUM CONTAMINANT LEVELS (MCL's)

Section	
611.300	Old MCLs for Inorganic Chemicals
611.301	Revised MCLs for Inorganic Chemicals
611.310	Old MCLs for Organic Chemicals
611.311	Revised MCLs for Organic Contaminants

611.320	Turbidity
611.325	Microbiological Contaminants
611.330	Radium and Gross Alpha Particle Activity
611.331	Beta Particle and Photon Radioactivity

SUBPART G: LEAD AND COPPER

Section	
611.350	General Requirements
611.351	Applicability of Corrosion Control
611.352	Corrosion Control Treatment
611.353	Source Water Treatment
611.354	Lead Service Line Replacement
611.355	Public Education and Supplemental Monitoring
611.356	Tap Water Monitoring for Lead and Copper
611.357	Monitoring for Water Quality Parameters
611.358	Monitoring for Lead and Copper in Source Water
611.359	Analytical Methods
611.360	Reporting
611.361	Recordkeeping

SUBPART K: GENERAL MONITORING AND ANALYTICAL REQUIREMENTS

Section	
611.480	Alternative Analytical Techniques
611.490	Certified Laboratories
611.491	Laboratory Testing Equipment
611.500	Consecutive PWSs
611.510	Special Monitoring for Unregulated Contaminants

SUBPART L: MICROBIOLOGICAL MONITORING AND ANALYTICAL REQUIREMENTS

Section	
611.521	Routine Coliform Monitoring
611.522	Repeat Coliform Monitoring
611.523	Invalidation of Total Coliform Samples
611.524	Sanitary Surveys
611.525	Fecal Coliform and E. Coli Testing
611.526	Analytical Methodology
611.527	Response to Violation
611.531	Analytical Requirements
611.532	Unfiltered PWSs
611.533	Filtered PWSs

SUBPART M: TURBIDITY MONITORING AND ANALYTICAL REQUIREMENTS

Section
611.560 Turbidity

SUBPART N: INORGANIC MONITORING AND ANALYTICAL REQUIREMENTS

Section
611.591 Violation of State MCL
611.592 Frequency of State Monitoring
611.600 Applicability
611.601 Monitoring Frequency
611.602 Asbestos Monitoring Frequency
611.603 Inorganic Monitoring Frequency
611.604 Nitrate Monitoring
611.605 Nitrite Monitoring
611.606 Confirmation Samples
611.607 More Frequent Monitoring and Confirmation Sampling
611.608 Additional Optional Monitoring
611.609 Determining Compliance
611.610 Inorganic Monitoring Times
611.611 Inorganic Analysis
611.612 Monitoring Requirements for Old Inorganic MCLs
611.630 Special Monitoring for Sodium
611.631 Special Monitoring for Inorganic Chemicals

SUBPART O: ORGANIC MONITORING AND ANALYTICAL REQUIREMENTS

Section
611.640 Definitions
611.641 Old MCLs
611.645 Analytical Methods for Organic Chemical Contaminants
611.646 Phase I, Phase II, and Phase V Volatile Organic Contaminants
611.647 Sampling for Phase I Volatile Organic Contaminants (Repealed)
611.648 Phase II, Phase IIB, and Phase V Synthetic Organic Contaminants
611.650 Monitoring for 36 Contaminants (Repealed)
611.657 Analytical Methods for 36 Contaminants (Repealed)
611.658 Special Monitoring for Organic Chemicals

SUBPART P: THM MONITORING AND ANALYTICAL REQUIREMENTS

Section
611.680 Sampling, Analytical and other Requirements
611.683 Reduced Monitoring Frequency
611.684 Averaging
611.685 Analytical Methods
611.686 Modification to System
611.687 Sampling for THM Potential

SUBPART Q: RADIOLOGICAL MONITORING AND ANALYTICAL
REQUIREMENTS

Section	
611.720	Analytical Methods
611.731	Gross Alpha
611.732	Manmade Radioactivity

SUBPART T: REPORTING, PUBLIC NOTIFICATION AND
RECORDKEEPING

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AUTHORITY: Implementing Sections 17 and 17.5 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/17, 17.5 and 27].

SOURCE: Adopted in R88-26 at 14 Ill. Reg. 16517, effective September 20, 1990; amended in R90-21 at 14 Ill. Reg. 20448, effective December 11, 1990; amended in R90-13 at 15 Ill. Reg. 1562, effective January 22, 1991; amended in R91-3 at 16 Ill. Reg. 19010, effective December 1, 1992; amended in R92-3 at 17 Ill. Reg. 7796, effective May 18, 1993; amended in R93-1 at 17 Ill. Reg. 12650, effective July 23, 1993; amended in R94-4 at 18 Ill. Reg. 12291, effective July 28, 1994; amended in R94-23 at 19 Ill. Reg. 8613, effective June 20, 1995; amended in R95-17 at 20 Ill. Reg. 14493, effective October 22, 1996; amended in R98-2 at 22 Ill. Reg. 5020, effective March 5, 1998; amended in R99-6 at 23 Ill. Reg. _____, effective _____.

Note: Capitalization denotes statutory language.

SUBPART A: GENERAL

Section 611.101 Definitions

As used in this Part, the term:

“Act” means the Environmental Protection Act [415 ILCS 5].

“Agency” means the Illinois Environmental Protection Agency.

BOARD NOTE: The Department of Public Health (“Public Health”) regulates non-community water supplies (“non-CWSs”, including non-transient, non-community water supplies (“NTNCWSs”) and transient non-community water supplies (“transient non-CWSs”). For the purposes of regulation of supplies by Public Health by reference to this Part, “Agency” shall mean Public Health.

“Ai” means “inactivation ratio”.

“Approved source of bottled water”, for the purposes of Section 611.130(e)(4), means a source of water and the water therefrom, whether it be from a spring, artesian well, drilled well, municipal water supply, or any other source, that has been inspected and the water sampled, analyzed, and found to be a safe and sanitary quality according to applicable laws and regulations of State and local government agencies having jurisdiction, as evidenced by the presence in the plant of current certificates or notations of approval from each government agency or agencies having jurisdiction over the source, the water it bottles, and the distribution of the water in commerce.

BOARD NOTE: Derived from 40 CFR 142.62(g)(2) and 21 CFR 129.3(a) (19948). The Board cannot compile an exhaustive listing of all federal, state, and local laws to which bottled water and bottling water may be subjected. However, the statutes and regulations of which the Board is aware are the following: the Illinois Food, Drug and Cosmetic Act [410 ILCS 620], the Bottled Water Act [815 ILCS 310], the DPH Water Well Construction Code (77 Ill. Adm. Code 920), the DPH Water Well Pump Installation Code (77 Ill. Adm. Code 925), the federal

bottled water quality standards (21 CFR 103.35), the federal drinking water processing and bottling standards (21 CFR 129), the federal Good Manufacturing Practices for human foods (21 CFR 110), the federal Fair Packaging and Labeling Act (15 U.S.C. ~~USC~~ §§ 1451 et seq.), and the federal Fair Packaging and Labeling regulations (21 CFR 201).

“Best available technology” or “BAT” means the best technology, treatment techniques or other means that U.S. ~~EPA~~ USEPA has found are available for the contaminant in question. BAT is specified in Subpart F of this Part.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Board” means the Illinois Pollution Control Board.

“CAS No” means “Chemical Abstracts Services Number”.

“CT” or “CT_{calc}” is the product of “residual disinfectant concentration” (RDC or C) in mg/L determined before or at the first customer, and the corresponding “disinfectant contact time” (T) in minutes. If a supplier applies disinfectants at more than one point prior to the first customer, it shall determine the CT of each disinfectant sequence before or at the first customer to determine the total percent inactivation or “total inactivation ratio”. In determining the total inactivation ratio, the supplier shall determine the RDC of each disinfection sequence and corresponding contact time before any subsequent disinfection application point(s). (See “CT_{99.9}”)

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“CT_{99.9}” is the CT value required for 99.9 percent (3-log) inactivation of *Giardia lamblia* cysts. CT_{99.9} for a variety of disinfectants and conditions appear in Tables 1.1-1.6, 2.1 and 3.1 of Section 611. Appendix B. (See “Inactivation Ratio”.)

BOARD NOTE: Derived from the definition of “CT” in 40 CFR 141.2 (19948).

“Coagulation” means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Community Water System” or “CWS” means a public water system (PWS) that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

BOARD NOTE: Derived from 40 CFR 141.2 (19948). This definition differs slightly from that of Section 3.05 of the Act.

“Compliance cycle” means the nine-year calendar year cycle during which public water systems (PWSs) must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar cycle begins January 1, 1993, and ends

December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011, and ends December 31, 2019.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Compliance period” means a three-year calendar year period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993, to December 31, 1995; the second from January 1, 1996, to December 31, 1998; the third from January 1, 1999, to December 31, 2001.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Confluent growth” means a continuous bacterial growth covering the entire filtration area of a membrane filter or a portion thereof, in which bacterial colonies are not discrete.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Contaminant” means any physical, chemical, biological or radiological substance or matter in water.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Conventional filtration treatment” means a series of processes including coagulation, flocculation, sedimentation and filtration resulting in substantial particulate removal.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Diatomaceous earth filtration” means a process resulting in substantial particulate removal in which:

A precoat cake of diatomaceous earth filter media is deposited on a support membrane (septum); and

While the water is filtered by passing through the cake on the septum, additional filter media known as body feed is continuously added to the feed water to maintain the permeability of the filter cake.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Direct filtration” means a series of processes including coagulation and filtration but excluding sedimentation resulting in substantial particulate removal.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Disinfectant” means any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines and ozone added to water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic microorganisms.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Disinfectant contact time” or “T” means the time in minutes that it takes for water to move from the point of disinfectant application or the previous point of RDC measurement to a point before or at the point where RDC is measured.

Where only one RDC is measured, T is the time in minutes that it takes for water to move from the point of disinfectant application to a point before or at where RDC is measured.

Where more than one RDC is measured, T is:

For the first measurement of RDC, the time in minutes that it takes for water to move from the first or only point of disinfectant application to a point before or at the point where the first RDC is measured, and

For subsequent measurements of RDC, the time in minutes that it takes for water to move from the previous RDC measurement point to the RDC measurement point for which the particular T is being calculated.

T in pipelines must be calculated based on “plug flow” by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe.

T within mixing basins and storage reservoirs must be determined by tracer studies or an equivalent demonstration.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Disinfection” means a process that inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Distribution system” includes all points downstream of an “entry point” to the point of consumer ownership.

“Domestic or other non-distribution system plumbing problem” means a coliform contamination problem in a PWS with more than one service connection that is limited to the specific service connection from which the coliform-positive sample was taken.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Dose equivalent” means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Entry point” means a point just downstream of the final treatment operation, but upstream of the first user and upstream of any mixing with other water. If raw water is used without treatment, the “entry point” is the raw water source. If a PWS receives treated water from another PWS, the “entry point” is a point just downstream of the other PWS, but upstream of the first user on the receiving PWS, and upstream of any mixing with other water.

“Filtration” means a process for removing particulate matter from water by passage through porous media.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Flocculation” means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“GC” means “gas chromatography” or “gas-liquid phase chromatography”.

“GC/MS” means gas chromatography (GC) followed by mass spectrometry (MS).

“Gross alpha particle activity” means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Gross beta particle activity” means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Groundwater under the direct influence of surface water” is as determined in Section 611.212.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“GWS” means “groundwater system”, a public water supply (PWS) that uses only groundwater sources.

BOARD NOTE: Drawn from 40 CFR 141.23(b)(2) & 141.24(f)(2) note (19948).

“Halogen” means one of the chemical elements chlorine, bromine or iodine.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“HPC” means “heterotrophic plate count”, measured as specified in Section 611.531(c).

“Inactivation Ratio” (Ai) means:

$$A_i = CT_{\text{calc}}/CT_{99.9}$$

The sum of the inactivation ratios, or “total inactivation ratio” (B) is calculated by adding together the inactivation ratio for each disinfection sequence:

$$B = \Sigma(A_i)$$

A total inactivation ratio equal to or greater than 1.0 is assumed to provide a 3-log inactivation of *Giardia lamblia* cysts.

BOARD NOTE: Derived from the definition of “CT” in 40 CFR 141.2 (19948).

“Initial compliance period” means the three-year compliance period that begins January 1, 1993, except for the MCLs for dichloromethane, 1,2,4-trichlorobenzene, 1,1,2-trichloroethane, benzo[a]pyrene, dalapon, di(2-ethylhexyl)adipate, di(2-ethylhexyl)phthalate, dinoseb, diquat, endothall, endrin, glyphosate, hexachlorobenzene, hexachlorocyclopentadiene, oxamyl, picloram, simazine, 2,3,7,8-TCDD, antimony, beryllium, cyanide, nickel, and thallium as they apply to suppliers whose supplies have fewer than 150 service connections, for which it means the three-year compliance period that begins on January 1, 1996.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“L” means “liter”.

“Legionella” means a genus of bacteria, some species of which have caused a type of pneumonia called Legionnaires Disease.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Man-made beta particle and photon emitters” means all radionuclides emitting beta particles and/or photons listed in Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure, NCRP Report Number 22, incorporated by reference in Section 611.102, except the daughter products of thorium-232, uranium-235 and uranium-238.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Maximum contaminant level” (“MCL”) means the maximum permissible level of a contaminant in water that is delivered to any user of a public water system. See Section 611.121.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Maximum Total Trihalomethane Potential” or “MTP” means the maximum concentration of total trihalomethanes (TTHMs) produced in a given water containing a disinfectant residual after 7 days at a temperature of 25° C or above.
BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“MFL” means millions of fibers per liter larger than 10 micrometers.
BOARD NOTE: Derived from 40 CFR 141.23(a)(4)(i) (19948).

“mg” means milligrams (1/1000th of a gram).

“mg/L” means milligrams per liter.

“Mixed system” means a PWS that uses both groundwater and surface water sources.
BOARD NOTE: Drawn from 40 CFR 141.23(b)(2) and 141.24(f)(2) note (19948).

“MUG” means 4-methyl-umbelliferyl-beta-d-glucuronide.

“Near the first service connection” means at one of the 20 percent of all service connections in the entire system that are nearest the public water system (PWS) treatment facility, as measured by water transport time within the distribution system.
BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“nm” means nanometer (1/1,000,000,000th of a meter).

“Non-community water system” or “NCWS” or “non-CWS” means a public water system (PWS) that is not a community water system (CWS). A non-community water system is either a “transient non-community water system (TWS)” or a “non-transient non-community water system (NTNCWS).”
BOARD NOTE: Derived from the definition of “public water system” in 40 CFR 141.2 (19948).

“Non-transient non-community water system” or “NTNCWS” means a public water system (PWS) that is not a community water system (CWS) and that regularly serves at least 25 of the same persons over 6 months per year.
BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“NPDWR” means “national primary drinking water regulation”.

“NTU” means “nephelometric turbidity units”.

“Old MCL” means one of the inorganic maximum contaminant levels (MCLs), codified at Section 611.300, or organic MCLs, codified at Section 611.310, including any marked as “additional state requirements.”

BOARD NOTE: Old MCLs are those derived prior to the implementation of the U.S. EPA “Phase II” regulations. The Section 611.640 definition of this term, which applies only to Subpart O of this Part, differs from this definition in that the definition does not include the Section 611.300 inorganic MCLs.

“P-A Coliform Test” means “Presence-Absence Coliform Test”.

“Performance evaluation sample” means a reference sample provided to a laboratory for the purpose of demonstrating that the laboratory can successfully analyze the sample within limits of performance specified by the Agency; or, for bacteriological laboratories, Public Health; or, for radiological laboratories, the Illinois Department of Nuclear Safety. The true value of the concentration of the reference material is unknown to the laboratory at the time of the analysis.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Person” means an individual, corporation, company, association, partnership, State, unit of local government, or federal agency.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Phase I” refers to that group of chemical contaminants and the accompanying regulations promulgated by ~~U.S. EPA~~ USEPA on July 8, 1987, at 52 Fed. Reg. 25712.

“Phase II” refers to that group of chemical contaminants and the accompanying regulations promulgated by ~~U.S. EPA~~ USEPA on January 30, 1991, at 56 Fed. Reg. 3578.

“Phase IIB” refers to that group of chemical contaminants and the accompanying regulations promulgated by ~~U.S. EPA~~ USEPA on July 1, 1991, at 56 Fed. Reg. 30266.

“Phase V” refers to that group of chemical contaminants promulgated by ~~U.S. EPA~~ USEPA on July 17, 1992, at 57 Fed. Reg. 31776.

“Picocurie” or “pCi” means the quantity of radioactive material producing 2.22 nuclear transformations per minute.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Point of disinfectant application” is the point at which the disinfectant is applied and downstream of which water is not subject to recontamination by surface water runoff.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Point-of-entry treatment device” is a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Point-of-use treatment device” is a treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Public Health” means the Illinois Department of Public Health.

BOARD NOTE: The Department of Public Health (“Public Health”) regulates non-community water supplies (“non-CWSs”, including non-transient, non-community water supplies (“NTNCWSs”) and transient non-community water supplies (“transient non-CWSs”). For the purposes of regulation of supplies by Public Health by reference to this Part, “Agency” shall mean Public Health.

“Public water system” or “PWS” means a system for the provision to the public of piped water for human consumption or other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. A PWS is either a community water system (CWS) or a non-community water system (non-CWS). Such term includes:

Any collection, treatment, storage and distribution facilities under control of the operator of such system and used primarily in connection with such system; and;

Any collection or pretreatment storage facilities not under such control that are used primarily in connection with such system.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Reliably and consistently” below a specified level for a contaminant means an Agency determination based on analytical results following the initial detection of a contaminant to determine the qualitative condition of water from an individual sampling point or source. The Agency shall base this determination on the consistency of analytical results, the degree below the MCL, the susceptibility of source water to variation, and other vulnerability factors pertinent to the contaminant detected that may influence the quality of water.

BOARD NOTE: Derived from 40 CFR 141.23(b)(9), 141.24(f)(11)(ii), and 141.24(f)(11)(iii) (19948).

“Rem” means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A “millirem (mrem)” is 1/1000 of a rem.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Repeat compliance period” means a compliance period that begins after the initial compliance period.

BOARD NOTE: Derived from 40 CFR 141.2 (1994~~8~~).

“Representative” means that a sample must reflect the quality of water that is delivered to consumers under conditions when all sources required to supply water under normal conditions are in use and all treatment is properly operating.

“Residual disinfectant concentration” (“RDC” or “C” in CT calculations) means the concentration of disinfectant measured in mg/L in a representative sample of water. For purposes of the requirement of Section 611.241(d) of maintaining a detectable RDC in the distribution system, “RDC” means a residual of free or combined chlorine.

BOARD NOTE: Derived from 40 CFR 141.2 (1994~~8~~).

“Safe Drinking Water Act” or “SDWA” means the Public Health Service Act, as amended by the Safe Drinking Water Act, Pub. L. 93-523, 42 ~~U.S.C.~~ USC 300f et seq.

BOARD NOTE: Derived from 40 CFR 141.2 (1994~~8~~).

“Sanitary survey” means an onsite review of the water source, facilities, equipment, operation and maintenance of a public water system (PWS) for the purpose of evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water.

BOARD NOTE: Derived from 40 CFR 141.2 (1994~~8~~).

“Sedimentation” means a process for removal of solids before filtration by gravity or separation.

BOARD NOTE: Derived from 40 CFR 141.2 (1994~~8~~).

“SEP” means special exception permit (Section 611.110).

“Service connection,” as used in the definition of public water system, does not include a connection to a system that delivers water by a constructed conveyance other than a pipe if any of the following is true:

The water is used exclusively for purposes other than residential use (consisting of drinking, bathing, and cooking, or other similar uses);

The Agency determines by issuing a SEP that alternative water for residential use or similar uses for drinking and cooking is provided to achieve the equivalent level of public health protection provided by the applicable national primary drinking water regulations; or

The Agency determines by issuing a SEP that the water provided for residential use or similar uses for drinking, cooking, and bathing is centrally treated or treated at the point of entry by the provider, a pass-through entity, or the user to achieve the equivalent level of protection provided by the applicable national primary drinking water regulations.

BOARD NOTE: Derived from 40 CFR 141.2 (1998). See sections 1401(4)(B)(i)(II) and (4)(B)(i)(III) of SDWA (42 USC 300f(4)(B)(i)(II) & (4)(B)(i)(III) (1996)).

“Slow sand filtration” means a process involving passage of raw water through a bed of sand at low velocity (generally less than 0.4 meters per hour (m/h)) resulting in substantial particulate removal by physical and biological mechanisms.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“SOC” or “Synthetic organic chemical contaminant” refers to that group of contaminants designated as “SOCs”, or “synthetic organic chemicals” or “synthetic organic contaminants”, in U.S. EPA regulatory discussions and guidance documents. “SOCs” include alachlor, aldicarb, aldicarb sulfone, aldicarb sulfoxide, atrazine, benzo[a]pyrene, carbofuran, chlordane, dalapon, dibromoethylene (ethylene dibromide or EDB), dibromochloropropane (DBCP), di(2-ethylhexyl)-adipate, di(2-ethylhexyl)phthalate, dinoseb, diquat, endothall, endrin, glyphosate, heptachlor, heptachlor epoxide, hexachlorobenzene, hexachlorocyclopentadiene, lindane, methoxychlor, oxamyl, pentachlorophenol, picloram, simazine, toxaphene, polychlorinated biphenyls (PCBs), 2,4-D, 2,3,7,8-TCDD, and 2,4,5-TP.

“Source” means a well, reservoir, or other source of raw water.

“Special irrigation district” means an irrigation district in existence prior to May 18, 1994 that provides primarily agricultural service through a piped water system with only incidental residential use or similar use, where the system or the residential users or similar users of the system comply with either of the following exclusion conditions:

The Agency determines by issuing a SEP that alternative water is provided for residential use or similar uses for drinking or cooking to achieve the equivalent level of public health protection provided by the applicable national primary drinking water regulations; or

The Agency determines by issuing a SEP that the water provided for residential use or similar uses for drinking, cooking, and bathing is centrally treated or treated at the point of entry by the provider, a pass-through entity, or the user to achieve the equivalent level of protection provided by the applicable national primary drinking water regulations.

BOARD NOTE: Derived from 40 CFR 141.2 (1998) and sections 1401(4)(B)(i)(II) and (4)(B)(i)(III) of SDWA (42 USC 300f(4)(B)(i)(II) & (4)(B)(i)(III) (1996)).

“Standard sample” means the aliquot of finished drinking water that is examined for the presence of coliform bacteria.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Supplier of water” or “supplier” means any person who owns or operates a public water system (PWS). This term includes the “official custodian”.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Surface water” means all water that is open to the atmosphere and subject to surface runoff.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“SWS” means “surface water system”, a public water supply (PWS) that uses only surface water sources, including “groundwater under the direct influence of surface water”.

BOARD NOTE: Drawn from 40 CFR 141.23(b)(2) and 141.24(f)(2) note (19948).

“System with a single service connection” means a system that supplies drinking water to consumers via a single service line.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Too numerous to count” means that the total number of bacterial colonies exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Total trihalomethanes” or “TTHM” means the sum of the concentration of trihalomethanes (THMs), in milligrams per liter (mg/L), rounded to two significant figures.

BOARD NOTE: Derived from the definition of “total trihalomethanes” in 40 CFR 141.2 (19948). See the definition of THMs for a listing of the four compounds that U.S. EPA-USEPA considers TTHMs to comprise.

“Transient, non-community water system” or “transient non-CWS” means a non-CWS that does not regularly serve at least 25 of the same persons over six months of the year.

BOARD NOTE: Derived from 40 CFR 141.2 (19948). The federal regulations apply to all “public water systems”, which are defined as all systems having at least 15 service connections or regularly serving water to at least 25 persons. See 42 U.S.C. USC §300f(4). The Act mandates that the Board and the Agency regulate “public water supplies”, which it defines as having at least 15 service connections or regularly serving 25 persons daily at least 60 days per year. See Section 3.28 of the

Act [415 ILCS 5/3.28]. The Department of Public Health regulates transient non-community water systems.

“Treatment” means any process that changes the physical, chemical, microbiological, or radiological properties of water, is under the control of the supplier, and is not a “point of use” or “point of entry treatment device” as defined in this Section. “Treatment” includes, but is not limited to aeration, coagulation, sedimentation, filtration, activated carbon treatment, disinfection, and fluoridation.

“Trihalomethane” or “THM” means one of the family of organic compounds, named as derivatives of methane, in which three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure. The THMs are:

Trichloromethane (chloroform),

Dibromochloromethane,

Bromodichloromethane and

Tribromomethane (bromoform)

BOARD NOTE: Derived from the definitions of “total trihalomethanes” and “trihalomethanes” in 40 CFR 141.2 (19948).

“µg” means micrograms (1/1,000,000th of a gram).

“USEPA” or “U.S. EPA” means the U.S. Environmental Protection Agency.

“Virus” means a virus of fecal origin that is infectious to humans by waterborne transmission.

“VOC” or “volatile organic chemical contaminant” refers to that group of contaminants designated as “VOCs”, or “volatile organic chemicals” or “volatile organic contaminants”, in ~~U.S. EPA~~-USEPA regulatory discussions and guidance documents. “VOCs” include benzene, dichloromethane, tetrachloromethane (carbon tetrachloride), trichloroethylene, vinyl chloride, 1,1,1-trichloroethane (methyl chloroform), 1,1-dichloroethylene, 1,2-dichloroethane, cis-1,2-dichloroethylene, ethylbenzene, monochlorobenzene, o-dichlorobenzene, styrene, 1,2,4-trichlorobenzene, 1,1,2-trichloroethane, tetrachloroethylene, toluene, trans-1,2-dichloroethylene, xylene, and 1,2-dichloropropane.

BOARD NOTE: Derived from 40 CFR 141.2 (19948).

“Waterborne disease outbreak” means the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water

system (PWS) that is deficient in treatment, as determined by the appropriate local or State agency.

BOARD NOTE: Derived from 40 CFR 141.2 (1994~~8~~).

“Wellhead Protection Program” means the wellhead protection program for the State of Illinois, approved by ~~U.S. EPA~~ USEPA under Section 1428 of the SDWA.

BOARD NOTE: Derived from 40 CFR 141.71(b) (1994~~8~~). The wellhead protection program will include the “groundwater protection needs assessment” under Section 17.1 of the Act, and regulations to be adopted in 35 Ill. Adm. Code 615 et seq.

(Source: Amended at 23 Ill. Reg. _____, effective _____)

Section 611.102 Incorporations by Reference

- a) Abbreviations and short-name listing of references. The following names and abbreviated names, presented in alphabetical order, are used in this Part to refer to materials incorporated by reference:

“Amco-AEPA-1 Polymer” is available from Advanced Polymer Systems.

“ASTM Method” means a method published by and available from the American Society for Testing and Materials (ASTM).

“Colisure Test” means “Colisure Presence/Absence Test for Detection and Identification of Coliform Bacteria and Escherichia Coli in Drinking Water”, available from Millipore Corporation, Technical Services Department.

“Dioxin and Furan Method 1613” means “Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope-Dilution HRGC/HRMS”, available from NTIS.

“GLI Method 2” means GLI Method 2, “Turbidity”, Nov. 2, 1992, available from Great Lakes Instruments, Inc.

“Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources”, available from USEPA Science and Technology Branch.

“HASL Procedure Manual” means HASL Procedure Manual, HASL 300, available from ERDA Health and Safety Laboratory.

“Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure”, NCRP Report Number 22, available from NCRP.

“NCRP” means “National Council on Radiation Protection”.

“NTIS” means “National Technical Information Service”.

“New Jersey Radium Method” means “Determination of Radium 228 in Drinking Water”, available from the New Jersey Department of Environmental Protection.

“New York Radium Method” means “Determination of Ra-226 and Ra-228 (Ra-02)”, available from the New York Department of Public Health.

“ONGP-MUG Test” (meaning “minimal medium ortho-nitrophenyl-beta-d-galactopyranoside-4-methyl-umbelliferyl-beta-d-glucuronide test”), also called the “Autoanalysis Colilert System”, is Method 9223, available in “Standard Methods for the Examination of Water and Wastewater”, 18th ed., from American Public Health Association.

“Procedures for Radiochemical Analysis of Nuclear Reactor Aqueous Solutions”, available from NTIS.

“Radiochemical Methods” means “Interim Radiochemical Methodology for Drinking Water”, available from NTIS.

“Standard Methods”, means “Standard Methods for the Examination of Water and Wastewater”, available from the American Public Health Association or the American Waterworks Association.

“Technical Bulletin 601” means “Technical Bulletin 601, Standard Method of Testing for Nitrate in Drinking Water”, July, 1994, available from Analytical Technology, Inc.

“Technicon Methods” means “Fluoride in Water and Wastewater”, available from Technicon.

“USDOE Manual” means “EML Procedures Manual”, available from the United State Department of Energy.

“USEPA Asbestos Methods-100.1” means Method 100.1, “Analytical Method for Determination of Asbestos Fibers in Water”, available from NTIS.

“USEPA Asbestos Methods-100.2” means Method 100.2, “Determination of Asbestos Structures over 10-mm in Length in Drinking Water”, available from NTIS.

“USEPA Environmental Inorganics Methods” means “Methods for the Determination of Inorganic Substances in Environmental Samples”, available from NTIS.

“USEPA Environmental Metals Methods” means “Methods for the Determination of Metals in Environmental Samples”, available from NTIS.

“USEPA Organic Methods” means “Methods for the Determination of Organic Compounds in Drinking Water”, July, 1991, for Methods 502.2, 505, 507, 508, 508A, 515.1, and 531.1; “Methods for the Determination of Organic Compounds in Drinking Water--Supplement I”, July, 1990, for Methods 506, 547, 550, 550.1, and 551; and “Methods for the Determination of Organic Compounds in Drinking Water--Supplement II”, August, 1992, for Methods 515.2, 524.2, 548.1, 549.1, 552.1, and 555, available from NTIS. Methods 504.1, 508.1, and 525.2 are available from EPA EMSL.

“USGS Methods” means “Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of Inorganic and Organic Constituents in Water and Fluvial Sediments”, available from NTIS and USGS.

“USEPA Interim Radiochemical Methods” means “Interim Radiochemical Methodology for Drinking Water”, EPA 600/4-75-008 (revised), March 1976. Available from NTIS.

“USEPA Radioactivity Methods” means “Prescribed Procedures for Measurement of Radioactivity in Drinking Water”, EPA 600/4-80-032, August 1980. Available from NTIS.

“USEPA Radiochemical Analyses” means “Radiochemical Analytical Procedures for Analysis of Environmental Samples”, March 1979. Available from NTIS.

“USEPA Radiochemistry Methods” means “Radiochemistry Procedures Manual”, EPA 520/5-84-006, December 1987. Available from NTIS.

“USEPA Technical Notes” means “Technical Notes on Drinking Water Methods”, available from NTIS.

“Waters Method B-1011” means “Waters Test Method for the Determination of Nitrite/Nitrate in Water Using Single Column Ion Chromatography”, available from Millipore Corporation, Waters Chromatography Division.

- b) The Board incorporates the following publications by reference:

Access Analytical Systems, Inc., See Environetics, Inc.

Advanced Polymer Systems, 3696 Haven Avenue, Redwood City, CA 94063 415-366-2626:

Amco-AEPA-1 Polymer. See 40 CFR 141.22(a) (1995). Also, as referenced in ASTM D1889.

American Public Health Association, 1015 Fifteenth Street NW, Washington, DC 20005 800-645-5476:

“Standard Methods for the Examination of Water and Wastewater”, 17th Edition 1989 (referred to as “Standard Methods, 17th ed.”).

“Standard Methods for the Examination of Water and Wastewater”, 18th Edition, 1992, including “Supplement to the 18th Edition of Standard Methods for the Examination of Water and Wastewater”, 1994 (collectively referred to as “Standard Methods, 18th ed.”). See the methods listed separately for the same references under American Water Works Association.

“Standard Methods for the Examination of Water and Wastewater”, 19th Edition, 1995 (referred to as “Standard Methods, 19th ed.”).

American Waterworks Association et al., 6666 West Quincy Ave., Denver, CO 80235 303-794-7711:

Standard Methods for the Examination of Water and Wastewater, 13th Edition, 1971 (referred to as “Standard Methods, 13th ed.”).

Method 302, Gross Alpha and Gross Beta Radioactivity in Water (Total, Suspended and Dissolved).

Method 303, Total Radioactive Strontium and Strontium 90 in Water.

Method 304, Radium in Water by Precipitation.

Method 305, Radium 226 by Radon in Water (Soluble, Suspended and Total).

Method 306, Tritium in Water.

Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992 (referred to as “Standard Methods, 18th ed.”):

Method 2130 B, Turbidity, Nephelometric Method.

Method 2320 B, Alkalinity, Titration Method.

Method 2510 B, Conductivity, Laboratory Method.

Method 2550, Temperature, Laboratory and Field Methods.

Method 3111 B, Metals by Flame Atomic Absorption Spectrometry, Direct Air-Acetylene Flame Method.

Method 3111 D, Metals by Flame Atomic Absorption Spectrometry, Direct Nitrous Oxide-Acetylene Flame Method.

Method 3112 B, Metals by Cold-Vapor Atomic Absorption Spectrometry, Cold-Vapor Atomic Absorption Spectrometric Method.

Method 3113 B, Metals by Electrothermal Atomic Absorption Spectrometry, Electrothermal Atomic Absorption Spectrometric Method.

Method 3114 B, Metals by Hydride Generation/Atomic Absorption Spectrometry, Manual Hydride Generation/Atomic Absorption Spectrometric Method.

Method 3120 B, Metals by Plasma Emission Spectroscopy, Inductively Coupled Plasma (ICP) Method.

Method 3500-Ca D, Calcium, EDTA Titrimetric Method.

Method 4110 B, Determination of Anions by Ion Chromatography, Ion Chromatography with Chemical Suppression of Eluent Conductivity.

Method 4500-CN⁻ C, Cyanide, Total Cyanide after Distillation.

Method 4500-CN⁻ E, Cyanide, Colorimetric Method.

Method 4500-CN⁻ F, Cyanide, Cyanide-Selective Electrode Method.

Method 4500-CN⁻ G, Cyanide, Cyanides Amenable to Chlorination after Distillation.

Method 4500-Cl D, Chlorine (Residual), Amperometric Titration Method.

Method 4500-Cl E, Chlorine (Residual), Low-Level Amperometric Titration Method.

Method 4500-Cl F, Chlorine (Residual), DPD Ferrous Titrimetric Method.

Method 4500-Cl G, Chlorine (Residual), DPD Colorimetric Method.

Method 4500-Cl H, Chlorine (Residual), Syringaldazine (FACTS) Method.

Method 4500-Cl I, Chlorine (Residual), Iodometric Electrode Technique.

Method 4500-ClO₂ C, Chlorine Dioxide, Amperometric Method I.

Method 4500-ClO₂ D, Chlorine Dioxide, DPD Method.

Method 4500-ClO₂ E, Chlorine Dioxide, Amperometric Method II (Proposed).

Method 4500-F⁻ B, Fluoride, Preliminary Distillation Step.

Method 4500-F⁻ C, Fluoride, Ion-Selective Electrode Method.

Method 4500-F⁻ D, Fluoride, SPADNS Method.

Method 4500-F⁻ E, Fluoride, Complexone Method.

Method 4500-H⁺ B, pH Value, Electrometric Method.

Method 4500-NO₂⁻ B, Nitrogen (Nitrite), Colorimetric Method.

Method 4500-NO₃⁻ D, Nitrogen (Nitrate), Nitrate Electrode Method.

Method 4500-NO₃⁻ E, Nitrogen (Nitrate), Cadmium Reduction Method.

Method 4500-NO₃⁻ F, Nitrogen (Nitrate), Automated Cadmium Reduction Method.

Method 4500-O₃ B, Ozone (Residual) (Proposed), Indigo Colorimetric Method.

Method 4500-P E, Phosphorus, Ascorbic Acid Method.

Method 4500-P F, Phosphorus, Automated Ascorbic Acid Reduction Method.

Method 4500-Si D, Silica, Molybdosilicate Method.

Method 4500-Si E, Silica, Heteropoly Blue Method.

Method 4500-Si F, Silica, Automated Method for Molybdate-Reactive Silica.

Method 4500-SO₄²⁻ C, Sulfate, Gravimetric Method with Ignition of Residue.

Method 4500-SO₄²⁻ D, Sulfate, Gravimetric Method with Drying of Residue.

Method 4500-SO₄²⁻ F, Sulfate, Automated Methylthymol Blue Method.

Method 6610, Carbamate Pesticide Method.

Method 6651, Glyphosate Herbicide (Proposed).

Method 7110 B, Gross Alpha and Beta Radioactivity (Total, Suspended, and Dissolved), Evaporation Method for Gross Alpha-Beta.

Method 7110 C, Gross Alpha and Beta Radioactivity (Total, Suspended, and Dissolved), Coprecipitation Method for Gross Alpha Radioactivity in Drinking Water (Proposed).

Method 7500-Cs B, Radioactive Cesium, Precipitation Method.

Method 7500-3H, B, Tritium, Liquid Scintillation Spectrometric Method.

Method 7500-I B, Radioactive Iodine, Precipitation Method.

Method 7500-I C, Radioactive Iodine, Ion-Exchange Method.

Method 7500-I D, Radioactive Iodine, Distillation Method.

Method 7500-Ra B, Radium, Precipitation Method.

Method 7500-Ra C, Radium, Emanation Method.

Method 7500-Ra D, Radium, Sequential Precipitation Method (Proposed).

Method 7500-U B, Uranium, Radiochemical Method (Proposed).

Method 7500-U C, Uranium, Isotopic Method (Proposed).

Method 9215 B, Heterotrophic Plate Count, Pour Plate Method.

Method 9221 A, Multiple-Tube Fermentation Technique for Members of the Coliform Group, Introduction.

Method 9221 B, Multiple-Tube Fermentation Technique for Members of the Coliform Group, Standard Total Coliform Fermentation Technique.

Method 9221 C, Multiple-Tube Fermentation Technique for Members of the Coliform Group, Estimation of Bacterial Density.

Method 9221 D, Multiple-Tube Fermentation Technique for Members of the Coliform Group, Presence-Absence (P-A) Coliform Test.

Method 9222 A, Membrane Filter Technique for Members of the Coliform Group, Introduction.

Method 9222 B, Membrane Filter Technique for Members of the Coliform Group, Standard Total Coliform Membrane Filter Procedure.

Method 9222 C, Membrane Filter Technique for Members of the Coliform Group, Delayed-Incubation Total Coliform Procedure.

Method 9223, Chromogenic Substrate Coliform Test (Proposed).

~~Standard Methods for the Examination of Water and Wastewater, 18th Edition Supplement, 1994 (Referred to as "Standard Methods, 18th ed."):~~

Standard Methods for the Examination of Water and Wastewater, 19th Edition, 1995 (referred to as "Standard Methods, 19th ed."):

Method 7120-B, Gamma Spectrometric Method.

Method 7500-U C, Uranium, Isotopic Method.

Analytical Technology, Inc. ATI Orion, 529 Main Street, Boston, MA 02129:

Technical Bulletin 601, "Standard Method of Testing for Nitrate in Drinking Water", July, 1994, PN 221890-001 (referred to as "Technical Bulletin 601").

ASTM. American Society for Testing and Materials, 1700 Race Street, Philadelphia, PA 19103 215-299-5585:

ASTM Method D511-93 A and B, "Standard Test Methods for Calcium and Magnesium in Water", "Test Method A--

complexometric Titration” & “Test Method B--Atomic Absorption Spectrophotometric”, approved 1993.

ASTM Method D515-88 A, “Standard Test Methods for Phosphorus in Water”, “Test Method A--Colorimetric Ascorbic Acid Reduction”, approved August 19, 1988.

ASTM Method D859-88, “Standard Test Method for Silica in Water”, approved August 19, 1988.

ASTM Method D1067-92 B, “Standard Test Methods for Acidity or Alkalinity in Water”, “Test Method B--Electrometric or Color-Change Titration”, approved May 15, 1992.

ASTM Method D1125-91 A, “Standard Test Methods for Electrical Conductivity and Resistivity of Water”, “Test Method A--Field and Routine Laboratory Measurement of Static (Non-Flowing) Samples”, approved June 15, 1991.

ASTM Method D1179-93 B “Standard Test Methods for Fluoride in Water”, “Test Method B--Ion Selective Electrode”, approved 1993.

ASTM Method D1293-84 “Standard Test Methods for pH of Water”, “Test Method A--Precise Laboratory Measurement” & “Test Method B--Routine or Continuous Measurement”, approved October 26, 1984.

ASTM Method D1688-90 A or C, “Standard Test Methods for Copper in Water”, “Test Method A--Atomic Absorption, Direct” & “Test Method C--Atomic Absorption, Graphite Furnace”, approved March 15, 1990.

ASTM Method D2036-91 A or B, “Standard Test Methods for Cyanide in Water”, “Test Method A--Total Cyanides after Distillation” & “Test Method B--Cyanides Amenable to Chlorination by Difference”, approved September 15, 1991.

ASTM Method D2459-72, “Standard Test Method for Gamma Spectrometry in Water,” approved July 28, 1972, discontinued 1988.

ASTM Method D2460-90, “Standard Test Method for Radionuclides of Radium in Water”, approved 1990.

ASTM Method D2907-91, “Standard Test Methods for Microquantities of Uranium in Water by Fluorometry”, “Test Method A--Direct Fluorometric” & “Test Method B—Extraction”, approved June 15, 1991.

ASTM Method D2972-93 B or C, “Standard Test Methods for Arsenic in Water”, “Test Method B--Atomic Absorption, Hydride Generation” & “Test Method C--Atomic Absorption, Graphite Furnace”, approved 1993.

ASTM Method D3223-91, “Standard Test Method for Total Mercury in Water”, approved September 23, 1991.

ASTM Method D3454-91, “Standard Test Method for Radium-226 in Water”, approved 1991.

ASTM Method D3559-90 D, “Standard Test Methods for Lead in Water”, “Test Method D--Atomic Absorption, Graphite Furnace”, approved August 6, 1990.

ASTM Method D3645-93 B, “Standard Test Methods for Beryllium in Water”, “Method B--Atomic Absorption, Graphite Furnace”, approved 1993.

ASTM Method D3649-91, “Standard Test Method for High-Resolution Gamma-Ray Spectrometry of Water”, approved 1991.

ASTM Method D3697-92, “Standard Test Method for Antimony in Water”, approved June 15, 1992.

ASTM Method D3859-93 A, “Standard Test Methods for Selenium in Water”, “Method A--Atomic Absorption, Hydride Method”, approved 1993.

ASTM Method D3867-90 A and B, “Standard Test Methods for Nitrite-Nitrate in Water”, “Test Method A--Automated Cadmium Reduction” & “Test Method B--Manual Cadmium Reduction”, approved January 10, 1990.

ASTM Method D3972-90, “Standard Test Method for Isotopic Uranium in Water by Radiochemistry”, approved 1990.

ASTM Method D4107-91, “Standard Test Method for Tritium in Drinking Water”, approved 1991.

ASTM Method D4327-91, "Standard Test Method for Anions in Water by Ion Chromatography", approved October 15, 1991.

ASTM Method D4785-88, "Standard Test Method for Low-Level Iodine-131 in Water", approved 1988.

ASTM Method D5174-91, "Standard Test Method for Trace Uranium in Water by Pulsed-Laser Phosphorimetry", approved 1991.

ERDA Health and Safety Laboratory, New York, NY:

HASL Procedure Manual, HASL 300, 1973. See 40 CFR 141.25(b)(2) (1995).

Great Lakes Instruments, Inc., 8855 North 55th Street, Milwaukee, WI 53223:

GLI Method 2, "Turbidity", Nov. 2, 1992.

Millipore Corporation, Technical Services Department, 80 Ashby Road, Milford, MA 01730 800-654-5476:

Colisure Presence/Absence Test for Detection and Identification of Coliform Bacteria and Escherichia Coli in Drinking Water, February 28, 1994 (referred to as "Colisure Test").

Millipore Corporation, Waters Chromatography Division, 34 Maple St., Milford, MA 01757 800-252-4752:

Waters Test Method for the Determination of Nitrite/Nitrate in Water Using Single Column Ion Chromatography, Method B-1011 (referred to as "Waters Method B-1011").

NCRP. National Council on Radiation Protection, 7910 Woodmont Ave., Bethesda, MD 301-657-2652:

"Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure", NCRP Report Number 22, June 5, 1959.

NSF. National Sanitation Foundation International, 3475 Plymouth Road, PO Box 130140, Ann Arbor, Michigan 48113-0140 (telephone: 734-769-8010):

NSF Standard 61, section 9, November 1998.

NTIS. National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161 (703) 487-4600 or 800-553-6847:

“Interim Radiochemical Methodology for Drinking Water”, EPA 600/4-75-008 (revised), March 1976 (referred to as “USEPA Interim Radiochemical Methods”). (Pages 1, 4, 6, 9, 13, 16, 24, 29, 34)

Method 100.1, “Analytical Method for Determination of Asbestos Fibers in Water”, EPA-600/4-83-043, September, 1983, Doc. No. PB83-260471 (referred to as “USEPA Asbestos Methods-100.1”).

Method 100.2, “Determination of Asbestos Structures over 10-mm in Length in Drinking Water”, EPA-600/4-83-043, June, 1994, Doc. No. PB94-201902 (Referred to as “USEPA Asbestos Methods-100.2”).

“Methods for Chemical Analysis of Water and Wastes”, March, 1983, Doc. No. PB84-128677 (referred to as “USEPA Inorganic Methods”). (Methods 150.1, 150.2, and 245.2, which formerly appeared in this reference, are available from USEPA EMSL.)

“Methods for the Determination of Metals in Environmental Samples”, June, 1991, Doc. No. PB91-231498 (referred to as “USEPA Environmental Metals Methods”).

“Methods for the Determination of Organic Compounds in Drinking Water”, December, 1988, revised July, 1991, EPA-600/4-88/039 (referred to as “USEPA Organic Methods”). (For methods 502.2, 505, 507, 508, 508A, 515.1 and 531.1.)

“Methods for the Determination of Organic Compounds in Drinking Water--Supplement I”, July, 1990, EPA-600-4-90-020 (referred to as “USEPA Organic Methods”). (For methods 506, 547, 550, 550.1, and 551.)

“Methods for the Determination of Organic Compounds in Drinking Water--Supplement II”, August, 1992, EPA-600/R-92-129 (referred to as “USEPA Organic Methods”). (For methods 515.2, 524.2, 548.1, 549.1, 552.1 and 555.)

“Prescribed Procedures for Measurement of Radioactivity in Drinking Water”, EPA 600/4-80-032, August 1980 (referred to as “USEPA Radioactivity Methods”). (Methods 900, 901, 901.1, 902, 903, 903.1, 904, 905, 906, 908, 908.1)

“Procedures for Radiochemical Analysis of Nuclear Reactor Aqueous Solutions”, H.L. Krieger and S. Gold, EPA-R4-73-014, May, 1973, Doc. No. PB222-154/7BA.

“Radiochemical Analytical Procedures for Analysis of Environmental Samples”, March, 1979, Doc. No. EMSL LV 053917 (referred to as “USEPA Radiochemical Analyses”). (Pages 1, 19, 33, 65, 87, 92)

“Radiochemistry Procedures Manual”, EPA-520/5-84-006, December, 1987, Doc. No. PB-84-215581 (referred to as “USEPA Radiochemistry Methods”). (Methods 00-01, 00-02, 00-07, H-02, Ra-03, Ra-04, Ra-05, Sr-04)

“Technical Notes on Drinking Water Methods”, EPA-600/R-94-173, October, 1994, Doc. No. PB-104766 (referred to as “USEPA Technical Notes”).

BOARD NOTE: USEPA made the following assertion with regard to this reference at 40 CFR 141.23(k)(1) and 141.24(e) and (n)(11) (1995): “This document contains other analytical test procedures and approved analytical methods that remain available for compliance monitoring until July 1, 1996.”

“Tetra- through Octa- Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS”, October, 1994, EPA-821-B-94-005 (referred to as “Dioxin and Furan Method 1613”).

New Jersey Department of Environment, Division of Environmental Quality, Bureau of Radiation and Inorganic Analytical Services, 9 Ewing Street, Trenton, NJ 08625:

“Determination of Radium 228 in Drinking Water”, August 1990.

New York Department of Health, Radiological Sciences Institute, Center for Laboratories and Research, Empire State Plaza, Albany, NY 12201:

“Determination of Ra-226 and Ra-228 (Ra-02)”, January 1980, Revised June 1982.

Technicon Industrial Systems, Tarrytown, NY 10591:

“Fluoride in Water and Wastewater”, Industrial Method #129-71W, December, 1972 (referred to as “Technicon Methods: Method #129-71W”). See 40 CFR 141.23(k)(1), footnote 11_(1995).

“Fluoride in Water and Wastewater”, #380-75WE, February, 1976 (referred to as “Technicon Methods: Method #380-75WE”). See 40 CFR 141.23(k)(1), footnote 11 (1995).

United States Department of Energy, available at the Environmental Measurements Laboratory, U.S. Department of Energy, 376 Hudson Street, New York, NY 10014-3621:

“EML Procedures Manual”, 27th Edition, Volume 1, 1990.

United States Environmental Protection Agency, EMSL, Cincinnati, OH 45268 513-569-7586:

“Interim Radiochemical Methodology for Drinking Water”, EPA-600/4-75-008 (referred to as “Radiochemical Methods”). (Revised) March, 1976.

“Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water” (referred to as “USEPA Organic Methods”). (For methods 504.1, 508.1, and 525.2 only). See NTIS.

“Procedures for Radiochemical Analysis of Nuclear Reactor Aqueous Solutions”. See NTIS.

USEPA, Science and Technology Branch, Criteria and Standards Division, Office of Drinking Water, Washington D.C. 20460:

“Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems using Surface Water Sources”, October, 1989.

USGS. Books and Open-File Reports Section, United States Geological Survey, Federal Center, Box 25425, Denver, CO 80225-0425:

Methods available upon request by method number from “Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of Inorganic and Organic Constituents in Water and Fluvial Sediments”, Open File Report 93-125 or Book

5, Chapter A-1, "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments", 3d ed., Open-File Report 85-495, 1989, as appropriate (referred to as "USGS Methods").

I-1030-85

I-1062-85

I-1601-85

I-1700-85

I-2598-85

I-2601-90

I-2700-85

I-3300-85

Methods available upon request by method number from "Methods for Determination of Radioactive Substances in Water and Fluvial Sediments", Chapter A5 in Book 5 of "Techniques of Water-Resources Investigations of the United States Geological Survey", 1997.

R-1110-76

R-1111-76

R-1120-76

R-1140-76

R-1141-76

R-1142-76

R-1160-76

R-1171-76

R-1180-76

R-1181-76

R-1182-76

- c) The Board incorporates the following federal regulations by reference:
40 CFR 136, Appendix B and C (199598).
- d) This Part incorporates no later amendments or editions.

(Source: Amended at 23 Ill. Reg. _____, effective _____)

Section 611.126 Prohibition on Use of Lead

- a) In general. Prohibition. Any pipe, any pipe or plumbing fitting or fixture, solder or flux, shall be lead free, as defined by subsection ~~(d)~~ (b), if it is used after June 19, 1986, in the installation or repair of:
- 1) Any PWS, or
 - 2) Any plumbing in a residential or nonresidential facility providing water for human consumption ~~which~~ that is connected to a PWS. This subsection (a) does not apply to leaded joints necessary for the repair of cast iron pipes.
- ~~(d)~~(b) Definition of lead free. For purposes of this Section, the term “lead free”:
- 1) When used with respect to solders and flux, refers to solders and flux containing not more than 0.2 percent lead, ~~and~~;
 - 2) When used with respect to pipes and pipe fittings, refers to pipes and pipe fittings containing not more than 8.0 percent lead; and
 - 3) When used with respect to plumbing fittings and fixtures, refers to plumbing fittings and fixtures in compliance with NSF Standard 61, section 9, incorporated by reference in Section 611.102.

BOARD NOTE: Derived from 40 CFR 141.43(a) and (d) (198998) and 42 USC 300g-6(a)(1) (1998).

(Source: Amended at 23 Ill. Reg. _____, effective _____)

SUBPART C: USE OF NON-CENTRALIZED TREATMENT DEVICES

Section 611.290

Use of Point-of-Use Devices or Bottled Water

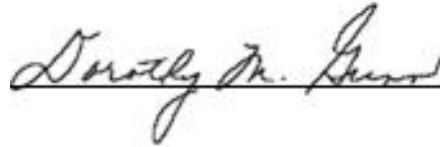
- a) Suppliers shall not use bottled water ~~or point-of-use devices~~ to achieve compliance with an MCL.
- b) Bottled water or point-of-use devices may be used on a temporary basis to avoid an unreasonable risk to health pursuant to a SEP granted by the Agency under Section 611.110.
- c) Any use of bottled water must comply with the substantive requirements of Section 611.130(e), except that the supplier shall submit its quality control plan for Agency review as part of its SEP request, rather than for Board review.

BOARD NOTE: Derived from 40 CFR 141.101 (19928).

(Source: Amended at 23 Ill. Reg. _____, effective _____)

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, do hereby certify that the above opinion and order was adopted on the 4th day of February 1999 by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board